Claims

1. A composition formed by mixing (a) an acid with (b) phosphonic compounds. Acids in group (a) include, but are not limited to: hydrochloric, muratic, nitric, phosphoric, phosphorous, poly phosphoric, perchloric, citric and acetic acids. Phosphonic compounds in group (b) are selected from but not limited by the group consisting of (2-chloroethyl)phosphonic acid and salts of (2-chloroethyl)phosphonic acid.

2. A method for increasing the efficiency and efficacy of a phosphonic compounds (b) in controlling vegetation, the method comprising the step of applying to the vegetation a composition formed by mixing acids (a) a phosphonic compounds (b) and applying mixture to target plant foliage.

3. The method of claim 2 where the defoliation efficiency of the compound is increased.

4. The method of claim 2 where the plant growth regulator efficiency of the compound is increased.

5. The method of claim 2 where the growth inhibition efficiency of the compound is increased.

6. The method of claim 2 where the vegetation is cotton and the boll opening efficiency of the compound is increased.

7. The method of claim 2 where the vegetation is cotton and the defoliation efficiency of the compound is increased.

8. The method of claim 2 where the plant height stunting efficiency of the compound is increased.

9. The method of claim 2 where 2% volume to volume of the acid is applied with phosphonic compounds to the target plant which includes: apples, barley, blackberries, bromeliads, cantaloupes, cherries, coffee, cotton, cranberries, cucumbers, figs, filberts, grapes, guava, lemons, Macadamia nuts, ornamentals, peppers, pineapples, rye, squash, tangerines, tangerine hybrids, tobacco, tomatoes, walnuts, wheat, rape, corn, flax, maize, oranges, peaches, rubber, and sugarcane.

Abstract of the Disclosure: It has been shown that the formulation of phosphonic compound (ethephon) with sulfuric acid increases the efficacy and efficiency of ethephon and the speed of the effect of the ethephon. It was theorized that the effect that is shown by the mixture of ethephon and sulfuric acid could be achieved using another acid. The effect was demonstrated using muratic acid. All acids that reduce the pH of the spray carrier are claimed in this patent as synergist for phosphonic acid compounds such as ethephon.